hongxin Yang

List of Publications by Year
in descending order

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87	5,401	147726 31	82499 72
papers	citations	h-index	g-index

89	89	89	5110
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Room-temperature chiral magnetic skyrmions in ultrathin magnetic nanostructures. Nature Nanotechnology, 2016, 11, 449-454.	15.6	829
2	First-principles investigation of the very large perpendicular magnetic anisotropy at Fe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>|</mml:mo></mml:mrow></mml:math>MgO and Co<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>|</mml:mo></mml:mrow></mml:math>MgO interfaces. Physical Review B, 2011, 84, .	1.1	545
3	Anatomy of Dzyaloshinskii-Moriya Interaction at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Co</mml:mi><mml:mo>/</mml:mo><mml:mi>Pt</mml:mi></mml:mrow></mml:math>Interface. Physical Review Letters, 2015, 115, 267210.	2.9	507
4	Proximity Effects Induced in Graphene by Magnetic Insulators: First-Principles Calculations on Spin Filtering and Exchange-Splitting Gaps. Physical Review Letters, 2013, 110, 046603.	2.9	287
5	Giant Spin Hall Effect Induced by Skew Scattering from Bismuth Impurities inside Thin Film CuBi Alloys. Physical Review Letters, 2012, 109, 156602.	2.9	278
6	Significant Dzyaloshinskiiâ€“Moriya interaction at grapheneâ€“ferromagnet interfaces due to the Rashba effect. Nature Materials, 2018, 17, 605-609.	13.3	188
7	Very large Dzyaloshinskii-Moriya interaction in two-dimensional Janus manganese dichalcogenides and its application to realize skyrmion states. Physical Review B, 2020, 101, .	1.1	156
8	Controlling Dzyaloshinskii-Moriya Interaction via Chirality Dependent Atomic-Layer Stacking, Insulator Capping and Electric Field. Scientific Reports, 2018, 8, 12356.	1.6	153
9	Tailoring magnetic insulator proximity effects in graphene: first-principles calculations. 2D Materials, 2017, 4, 025074.	2.0	121
10	Origin of interfacial perpendicular magnetic anisotropy in MgO/CoFe/metallic capping layer structures. Scientific Reports, 2015, 5, 18173.	1.6	120
11	Anatomy and Giant Enhancement of the Perpendicular Magnetic Anisotropy of Cobaltâ€“Graphene Heterostructures. Nano Letters, 2016, 16, 145-151.	4.5	120
12	Anatomy of perpendicular magnetic anisotropy in Fe/MgO magnetic tunnel junctions: First-principles insight. Physical Review B, 2013, 88, .	1.1	117
13	Spin-valley coupling in a two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">V</mml:mi><mml:msub><mml:mi>Si</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">N</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math> monolayer. Physical Review B, 2021, 103, .	1.1	114
14	NÃ©el-type skyrmions and their current-induced motion in van der Waals ferromagnet-based heterostructures. Physical Review B, 2021, 103, .	1.1	110
15	Strain-tunable ferromagnetism and chiral spin textures in two-dimensional Janus chromium dichalcogenides. Physical Review B, 2020, 102, .	1.1	86
16	Ultrathin epitaxial cobalt films on graphene for spintronic investigations and applications. New Journal of Physics, 2010, 12, 103040.	1.2	74
17	Giant interfacial perpendicular magnetic anisotropy in MgO/CoFe/capping layer structures. Applied Physics Letters, 2017, 110, .	1.5	73
18	Inducing and optimizing magnetism in graphene nanomeshes. Physical Review B, 2011, 84, .	1.1	69

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19	Tuning the Dzyaloshinskiiâ€“Moriya interaction in Pt/Co/MgO heterostructures through the MgO thickness. Nanoscale, 2018, 10, 12062-12067.	2.8	66
20	Giant Enhancements of Perpendicular Magnetic Anisotropy and Spinâ€Orbit Torque by a MoS₂ Layer. Advanced Materials, 2019, 31, e1900776.	11.1	65
21	Anatomy of electric field control of perpendicular magnetic anisotropy at Fe/MgO interfaces. Physical Review B, 2016, 93, .	1.1	59
22	Large and robust electrical spin injection into GaAs at zero magnetic field using an ultrathin CoFeB/MgO injector. Physical Review B, 2014, 90, .	1.1	56
23	Ferroelectric Control of Organic/Ferromagnetic Spinterface. Advanced Materials, 2016, 28, 10204-10210.	11.1	55
24	Air-Protected Epitaxial Graphene/Ferromagnet Hybrids Prepared by Chemical Vapor Deposition and Intercalation. Journal of Physical Chemistry Letters, 2012, 3, 2059-2063.	2.1	54
25	Electrically switchable Rashba-type Dzyaloshinskii-Moriya interaction and skyrmion in two-dimensional magnetoelectric multiferroics. Physical Review B, 2020, 102, .	1.1	52
26	Effect of structural relaxation and oxidation conditions on interlayer exchange coupling in Fe|MgO|Fe tunnel junctions. Applied Physics Letters, 2010, 96, .	1.5	47
27	Reducing Dzyaloshinskii-Moriya interaction and field-free spin-orbit torque switching in synthetic antiferromagnets. Nature Communications, 2021, 12, 3113.	5.8	47
28	Robust and High Photoluminescence in WS₂ Monolayer through In Situ Defect Engineering. Advanced Functional Materials, 2021, 31, 2105339.	7.8	47
29	Long-Range Phase Coherence in Double-Barrier Magnetic Tunnel Junctions with a Large Thick Metallic Quantum Well. Physical Review Letters, 2015, 115, 157204.	2.9	37
30	Giant enhancement of perpendicular magnetic anisotropy and induced quantum anomalous Hall effect in graphene/ <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NiI</mml:mi><mml:mn>2</mml:mn></mml:msub></mml: heterostructures via tuning the van der Waals interlayer distance. Physical Review B, 2020, 101, .	1.1	37
31	Nonmetallic Atoms Induced Magnetic Anisotropy in Monolayer Chromium Trihalides. Journal of Physical Chemistry C, 2019, 123, 691-697.	1.5	33
32	NÃ©elâ€Type Elliptical Skyrmions in a Laterally Asymmetric Magnetic Multilayer. Advanced Materials, 2021, 33, e2006924.	11.1	32
33	Strain controlling transport properties of heterostructure composed of monolayer CrI3. Applied Physics Letters, 2019, 114, .	1.5	31
34	Ferroelectrically controlled topological magnetic phase in a Janus-magnet-based multiferroic heterostructure. Physical Review Research, 2021, 3, .	1.3	30
35	First-principles investigation of magnetocrystalline anisotropy at theL21fullHeusler|MgOinterfaces and tunnel junctions. Physical Review B, 2016, 94, .	1.1	29
36	Perpendicular Magnetic Anisotropy and Dzyaloshinskii-Moriya Interaction at an Oxide/Ferromagnetic Metal Interface. Physical Review Letters, 2020, 124, 217202.	2.9	27

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37	Interfacial Dzyaloshinskii-Moriya interaction between ferromagnetic insulator and heavy metal. Applied Physics Letters, 2020, 116, .	1.5	26
38	Anisotropic Dzyaloshinskiiâ€“Moriya Interaction and Topological Magnetism in Two-Dimensional Magnets Protected by P4ì...m2 Crystal Symmetry. Nano Letters, 2022, 22, 2334-2341.	4.5	26
39	Precisely Tuning the Contrast Properties of Zn_xFe_{3â€“x}O₄ Nanoparticles in Magnetic Resonance Imaging by Controlling Their Doping Content and Size. Chemistry of Materials, 2019, 31, 7255-7264.	3.2	25
40	Strainâ€Mediated High Conductivity in Ultrathin Antiferromagnetic Metallic Nitrides. Advanced Materials, 2021, 33, 2005920.	11.1	25
41	Quantifying the Dzyaloshinskii-Moriya Interaction Induced by the Bulk Magnetic Asymmetry. Physical Review Letters, 2022, 128, 167202.	2.9	25
42	Coherent Resonant Tunneling through Double Metallic Quantum Well States. Nano Letters, 2019, 19, 3019-3026.	4.5	22
43	Rashba-Type Dzyaloshinskiiâ€“Moriya Interaction, Perpendicular Magnetic Anisotropy, and Skyrmion States at 2D Materials/Co Interfaces. Nano Letters, 2021, 21, 7138-7144.	4.5	22
44	Spin-orbit coupling effect by minority interface resonance states in single-crystal magnetic tunnel junctions. Physical Review B, 2012, 86, .	1.1	20
45	Enhancement of ferroelectric performance in PVDF:Fe3O4 nanocomposite based organic multiferroic tunnel junctions. Applied Physics Letters, 2020, 116, .	1.5	19
46	Reversible control of Dzyaloshinskii-Moriya interaction at the graphene/Co interface via hydrogen absorption. Physical Review B, 2020, 101, .	1.1	19
47	Spontaneous formation of graphene on diamond (111) driven by B-doping induced surface reconstruction. Carbon, 2017, 115, 388-393.	5.4	18
48	Large anomalous Hall effect in a hexagonal ferromagnetic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">F</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>5</mml:mn></mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> single	1.1	18
49	Skyrmions-based logic gates in one single nanotrack completely reconstructed via chirality barrier. National Science Review, 2022, 9, .	4.6	18
50	Spin Hall effect induced by Bi impurities in Cu: Skew scattering and side-jump. Physical Review B, 2013, 88, .	1.1	17
51	Magnetic Exchange Field Modulation of Quantum Hall Ferromagnetism in 2D van der Waals CrCl₃/Graphene Heterostructures. ACS Applied Materials & Interfaces, 2021, 13, 10656-10663.	4.0	17
52	Multiferroic materials based on transition-metal dichalcogenides: Potential platform for reversible control of Dzyaloshinskii-Moriya interaction and skyrmion via electric field. Physical Review B, 2022, 105, .	1.1	17
53	Anisotropic Dzyaloshinskii-Moriya interaction protected by D2d crystal symmetry in two-dimensional ternary compounds. Npj Computational Materials, 2022, 8, .	3.5	17
54	Large voltage-controlled magnetic anisotropy in the SrTiO3/Fe/Cu structure. Applied Physics Letters, 2017, 111, 152403.	1.5	16

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55	Controllable Generation of Antiferromagnetic Skyrmions in Synthetic Antiferromagnets with Thermal Effect. Advanced Functional Materials, 2022, 32, .	7.8	16
56	Quenching of Spin Polarization Switching in Organic Multiferroic Tunnel Junctions by Ferroelectric â€œAiling-Channelâ€•in Organic Barrier. ACS Applied Materials & Interfaces, 2018, 10, 30614-30622.	4.0	14
57	Near-room temperature ferromagnetic behavior of single-atom-thick 2D iron in nanolaminated ternary MAX phases. Applied Physics Reviews, 2021, 8, .	5.5	14
58	Large Dzyaloshinskii-Moriya interaction and room-temperature nanoscale skyrmions in CoFeB/MgO heterostructures. Cell Reports Physical Science, 2021, 2, 100618.	2.8	14
59	Linear-superelastic Ti-Nb nanocomposite alloys with ultralow modulus via high-throughput phase-field design and machine learning. Npj Computational Materials, 2021, 7, .	3.5	13
60	Voltage Control of Skyrmion Bubbles for Topological Flexible Spintronic Devices. Advanced Electronic Materials, 2020, 6, 2000246.	2.6	12
61	Structural twinning-induced insulating phase in CrN (111) films. Physical Review Materials, 2021, 5, .	0.9	12
62	First-principles study of oxygenated diamond (001) surfaces with and without hydrogen. Applied Surface Science, 2007, 253, 4260-4266.	3.1	11
63	Counterpropagating topological interface states in graphene patchwork structures with regular arrays of nanoholes. Physical Review B, 2018, 98, .	1.1	11
64	Room-Temperature Ferromagnetism at an Oxide-Nitride Interface. Physical Review Letters, 2022, 128, 017202.	2.9	11
65	Anomalous valley Hall effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>A</mml:mi></mml:math>-type antiferromagnetic van der Waals heterostructures. Physical Review B, 2022, 105, .	1.1	11
66	First-principles investigation of magnetocrystalline anisotropy oscillations in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Co</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml: heterostructures. Physical Review B, 2018, 97, .	1.1	10
67	Intrinsic Controllable Magnetism of Graphene Grown on Fe. Journal of Physical Chemistry C, 2019, 123, 26870-26876.	1.5	10
68	MnPS3 spin-flop transition-induced anomalous Hall effect in graphite flake via van der Waals proximity coupling. Nanoscale, 2020, 12, 23266-23273.	2.8	10
69	Current-induced out-of-plane effective magnetic field in antiferromagnet/heavy metal/ferromagnet/heavy metal multilayer. Applied Physics Letters, 2020, 117, 092404.	1.5	9
70	Electrically Controllable Van Der Waals Antiferromagnetic Spin Valve. Physical Review Applied, 2021, 16, .	1.5	9
71	Effect of interlayer Dzyaloshinskii-Moriya interaction on spin structure in synthetic antiferromagnetic multilayers. Physical Review B, 2022, 105, .	1.1	9
72	Rashbaâ€“Edelstein Effect in the hâ€BN Van Der Waals Interface for Magnetization Switching. Advanced Materials, 2022, 34, .	11.1	9

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73	Role of Interfacial Orbital Hybridization in Spin-Orbit-Torque Generation in Pt -Based Heterostructures. Physical Review Applied, 2020, 14, .	1.5	8
74	Non-equilibrium epitaxy of metastable polymorphs of ultrawide-bandgap gallium oxide. Applied Physics Letters, 2022, 120, .	1.5	8
75	Precise Tuning of Skyrmion Density in a Controllable Manner by Ion Irradiation. ACS Applied Materials & Interfaces, 2022, 14, 34011-34019.	4.0	8
76	Direct Evidence of Spin Transfer Torque on Two-Dimensional Cobalt-Doped MoS₂ Ferromagnetic Material. ACS Applied Electronic Materials, 2020, 2, 1497-1504.	2.0	7
77	Evidence of a strong perpendicular magnetic anisotropy in Au/Co/MgO/GaN heterostructures. Nanoscale Advances, 2019, 1, 4466-4475.	2.2	5
78	Interfacial Dzyaloshinskii-Moriya interaction and perpendicular magnetic anisotropy at cobalt/diamond interfaces. Journal of Magnetism and Magnetic Materials, 2021, 529, 167852.	1.0	4
79	Room temperature magnetoresistance in CoFeB/SrTiO3/CoFeB magnetic tunnel junctions deposited by ion beam sputtering. Journal of Applied Physics, 2012, 111, .	1.1	3
80	Broken cubic symmetry driven co-emergence of type-I and type-II Dirac points in topological crystalline insulator ThTaN₃. Journal of Physics Condensed Matter, 2019, 31, 295501.	0.7	3
81	Exchange Coupling in Synthetic Anionâ€Engineered Chromia Heterostructures. Advanced Functional Materials, 2022, 32, 2109828.	7.8	3
82	Stable hydroxyl network on diamond (001) via first-principles and MD investigation. Surface Science, 2009, 603, 3035-3040.	0.8	1
83	Andreev reflection in a patterned graphene nanoribbon superconducting heterojunction. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1174-1181.	0.9	1
84	Synthesis and Properties of Monolayer Graphene (MLG)-Covered Fe(111). Chemistry of Materials, 2020, 32, 10463-10468.	3.2	1
85	Large magnetic anisotropy in Tetraoxa[8]circulene-based organometallic nanosheet. Journal of Magnetism and Magnetic Materials, 2021, 535, 168068.	1.0	1
86	NÃ©el-type antiferromagnetic skyrmionic crystals on two-dimensional square lattices investigated with optimized quantum Monte Carlo method. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 135, 114978.	1.3	1
87	Giant Dzyaloshinskii-Moriya Interaction and Room-Temperature Nanoscale Skyrmions in CoFeB/MgO Heterostructures. SSRN Electronic Journal, 0, , .	0.4	0